



1999

Holistic Medicine: Therapeutic Touch and Implications for Physical Therapy

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HOLISTIC MEDICINE: THERAPEUTIC TOUCH AND
IMPLICATIONS FOR PHYSICAL THERAPY

by

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Bachelor of Science in Physical Therapy
University of North Dakota, 1998

An Independent Study

Submitted to the Graduate Faculty of the

Department of Physical Therapy

School of Medicine

University of North Dakota

in partial fulfillment of the requirements

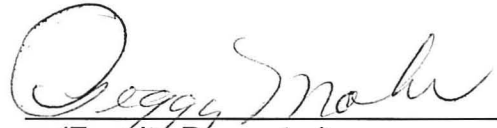
for the degree of

Master of Physical Therapy

Grand Forks, North Dakota
May
1999



This Independent Study, submitted by Lea Marie Hoff in partial fulfillment of the requirements for the Degree of Master of Physical Therapy from the University of North Dakota, has been read by the Faculty Preceptor, Advisor, and Chairperson of Physical Therapy under whom the work has been done and is hereby approved.


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ACKNOWLEDGMENTS

Thank you, Peg Mohr, for your help in completing this paper.

Thank you, Shelly, for being alive to see me through graduate school and for your support, encouragement, and laughter.

Thank you, Mom and Dad, for your support and love.

And thank you, God, for helping me reach another milestone along my life journey.

ABSTRACT

Alternative therapies and holistic medicine have been gaining popularity recently. It is important that health care providers have a general knowledge of holistic medicine and some of the approaches being used. Being informed will help health care providers make wise treatment choices.

Therapeutic touch (TT) is a holistic treatment approach which claims to induce physiologic effects through modulating the “human energy field.” Proponents of TT claim that healing is facilitated through conscious intent of practitioners to help the patient and rebalance the patient’s energy field. TT research findings are controversial. Much of the research is based on qualitative data, lacks adequate samples, and has failed to replicate significant results.

The purpose of this literature review is to describe holistic medicine and different treatment approaches, define TT and provide examples of TT application, and address the implications of using holistic approaches within physical therapy.

CHAPTER I

INTRODUCTION

Alternative therapies and holistic medicine have been gaining popularity recently. Current trends indicate that alternative therapies, such as therapeutic touch, are being utilized frequently by Americans. In 1997, a nationwide study¹ found that more than 42% of Americans use some form of alternative medicine. Paramore² estimated that 10% of the U.S. population, approximately 25 million people, made use of alternative therapies in 1994. Paramore² also speculated that use of alternative therapies will increase in the future. This is mainly because health care has become somewhat market-driven and Americans are using their freedom to choose among options to meet their health care needs.² Eisenberg and colleagues³ conducted a national survey in 1991, and the findings reported that one-third of the respondents used one unconventional therapy in the last year.³ These studies indicated that a growing number of people find that alternative therapies meet their health care needs more than traditional medicine.

Since these therapies are being utilized, it is important for physical therapists and health care providers to have a general knowledge of holistic medicine and some of the approaches being used. Techniques such as therapeutic massage and biofeedback are currently used in physical therapy and

are considered alternative forms of therapy.³ These treatment methods have been described as “holistic” therapies which treat people on three levels—mind, body, and spirit.³ Therapeutic touch (TT) is an alternative therapy which will be the focus of this literature review. Research findings have been controversial regarding the application of therapeutic touch to physical therapy. Ching⁴ proposed that TT induces physiologic effects similar to therapeutic massage and biofeedback (relaxation, for example). Rosa⁵ reported that therapeutic touch lacks scientific validity and is not an appropriate treatment option for physical therapy. Because of this conflict, a more in-depth review of TT will be included.

The purpose of this literature review is to describe holistic medicine, some of the holistic medicine approaches, with an emphasis on TT, and address the implications of using holistic medicine approaches within physical therapy.

The research questions this literature review will attempt to answer are the following:

1. What is holistic medicine and what are some of the approaches currently used?
2. What is therapeutic touch, how is it being applied, and what does research say about its effectiveness?
3. What are the implications of incorporating holistic medicine approaches into physical therapy?

CHAPTER II

HOLISTIC MEDICINE AND HOLISTIC APPROACHES

Many professionals, such as doctors, nurses, and physical therapists, have incorporated alternative therapies into practice.³ With the current trends indicating increased use of alternative therapies,² physical therapists and health care providers need to be informed about holistic medicine and the different approaches being utilized. The goal of this chapter is to inform physical therapists and health care providers about holistic medicine and to describe the more common approaches being utilized by the public.

Holistic Medicine

Holistic medicine is based on an approach rooted in Eastern philosophies which date back thousands of years.^{3,6,7} Holistic medicine stems from folk and Chinese medicine in which people used remedies made from natural herbs and substances from mother nature. An important principle of holistic medicine is treating the “whole” person. The integrated “whole” includes mind, body, and spirit.^{3,8} Practitioners of holistic medicine focus on health, wellness, and prevention of illness. Practitioners also emphasize nutrition and discourage medication use.

The holistic medicine movement began in the 1970s.⁶ Many patients were dissatisfied with modern medicine and sought safer, alternative methods of

health care.⁶ The holistic approach to treating illness seemed natural and safer to people than the invasive technology of modern medicine. The holistic approach differs from modern medicine which tends to focus on illness, disease, and using medications and invasive techniques for treatment. Holistic medicine is open to different models of health and illness and, consequently, involves much experimentation.⁶ Often, holistic practitioners will use methods which may be pleasant for the patient but are ineffective treatments and unscientific.⁶

As stated previously, the basis of holistic medicine is to approach the ill patient as a “whole.”³ This means examining mind, body, and spirit and assessing areas of imbalance. It is proposed that when things are balanced, they tend to work in harmony.⁶ This concept can be applied to the human body. The body is subject to many stressors, changes, and forces to challenge its equilibrium. Proponents of holistic medicine contend that when the equilibrium is disturbed, illness can occur.⁶ Holistic medicine philosophy asserts that health is a dynamic process and is the result of a balance of the human body as a whole, stressing that the whole is greater than the sum of its parts.^{3,6} A summary of the important principles of holism applied to holistic medicine is shown in Table 1.³

Holistic medicine is based on the Eastern world philosophy of practice.⁸ Consequently, it is important to understand the Eastern philosophy of practice in order to understand the different holistic medicine approaches described in this paper. The goals of healing based on the Eastern world view are shown in Table 2.⁸

Table 1.— Principles of Holism

- Emphasizes mind-body health
- Disease is a process
- Pain and/or disease may indicate internal conflicts
- Mind and body are interconnected
- Psychosomatic illness is responsible for many body ailments
- The mind plays a large role in illness
- The placebo effect shows evidence of the mind's influence in healing
- Assessments rely on qualitative data; quantitative data serve to compliment the assessment
- Treatment focuses on the whole patient
- Non-invasive techniques are promoted; technological interventions are kept to a minimum
- The patient is autonomous
- Health care provider is a therapeutic partner
- Caring is a vital component of healing

Table 2.—Eastern Goals and Principles of Healing

GOALS:

- Harmony with the environment in mind, body, and spirit
- Awakening the spirit
- Connecting to the meaning of life

PRINCIPLES:

- Nature's direction is toward order and harmony
- Living systems are interdependent
- Illness is part of the continuum of life
- Healing transforms and evolves
- Healing is viewed as a yin and yang reflection of the whole being in transition
- Healing occurs through love and compassion
- Love is the source of all healing
- All healing is spirit centered

Holistic Approaches

Within holistic medicine, there are several different treatment approaches. Physical therapy currently utilizes biofeedback which is considered a mind-body therapy and therapeutic massage which is a manual therapy.³ The following is an overview of some holistic treatment approaches. Specific treatment approaches addressed in this literature review include acupuncture, therapeutic massage, reflexology, biofeedback, yoga, and therapeutic touch. As a

supplement, additional holistic medicine approaches are briefly defined and listed in Appendix A.

Acupuncture

Acupuncture is based on the principle that a vital life force, referred to as “qi,” exists and is organized into patterns in the human body.^{3,9-12} These patterns of “qi” energy form 12 main meridians or channels which correspond to different organs in the body. The 12 organ systems include the small intestine, large intestine, stomach, lung, bladder, spleen/pancreas, heart, gallbladder, liver, pericardium, kidney, and triple warmer.^{10,12} The triple warmer or burner is not correlated with any organ, but it serves to guard all other organs in the body according to Chinese belief.¹² Yin and yang are terms which signify complimentary opposites such as negative and positive energy.³ The energy (yin and yang) in the meridians can become blocked and result in imbalance. The imbalance of an organ system produces symptoms of illness at the corresponding meridian.³

Acupuncturists insert long, thin metal needles into specific points along meridians. There are 722 points, 40 to 50 of which are commonly used.⁸ These acupuncture points are areas of electrical resistance on the skin’s surface.⁹ In addition, the points have specific functions. For example, it is theorized that specific points can regulate or move “qi,” balance yin and yang, influence blood flow, relieve pain, and clear heat in order to facilitate optimal organ function.⁹ Acupuncturists believe that by inserting needles at various points of the body, the “qi” energy can be manipulated, dispersed, or rebalanced.^{3,8} Acupuncture

treatments may also incorporate electrostimulation, ultrasound, and lasers instead of using needles.³

Therapeutic Massage

Therapeutic massage is an approach which involves manual manipulation of muscles and soft tissue. The purpose of therapeutic massage is to facilitate therapeutic effects in the circulatory, lymphatic, respiratory, and nervous systems.¹³ Various techniques are used in massage. Some of these include kneading, rubbing, pressing, rolling, slapping, and tapping.⁸ Physical therapists learn techniques described as effleurage, petrissage, tapotement, friction, and vibration.^{3,13}

Therapeutic massage has both physiological and psychological benefits. Physiologically, it improves blood circulation to improve perfusion and oxygenation of body tissues, sedates the nervous system, facilitates peristalsis, facilitates lung drainage, improves lymphatic circulation, decreases edema, and breaks adhesions and/or scar tissue.^{3,13} It is proposed that therapeutic massage may release “muscle memory” from a physical or psychological trauma.¹⁴ Psychologically, therapeutic massage benefits patients through the comfort of human touch.¹⁵ Today, therapeutic massage commonly is used for relaxation and stress reduction.^{3,15}

Reflexology

Reflexology is a manual therapy which is based on the theory that specific points on the hands and feet correlate with different organs and parts of the body.^{3,9,10,12} Reflexologists claim that if reflex points are massaged, a reflex

supposedly occurs to release blocked energy or “qi” in the corresponding part of the body. The reflex points in the hands and/or feet are thought to be 20 times more sensitive than the related organ.¹⁰ Other areas of the body also have reflex points, but the feet are most effective for treatment purposes.¹⁰ Reflexology has been used for thousands of years and dates back to 2,300 B.C. in Egypt.⁹

Therapists who have incorporated this holistic medicine approach into practice propose that the technique reduces lactic acid in the feet and breaks up calcium crystals which may form in the nerve endings; this unblocks energy and restores the natural energy flow.³ Reflexology is based on the same theory as acupuncture which claims that a meridian energy structure of “qi” exists throughout the human body.¹² Reflexology is called “zone therapy” in the U.S. and is believed by advocates to relieve stress, improve circulation, enhance energy, and decrease muscle tension.¹⁴

Biofeedback

Biofeedback attempts to train patients how to voluntarily control autonomic functions.³ The basis of biofeedback is mind over matter. In simple terms, the mind is believed to be able to control the body. Davis^{9(p102)} stated, “Basically, biofeedback acts as a sixth sense by providing an artificial proprioception feedback.” This artificial feedback is facilitated through use of electronic equipment. Biofeedback uses equipment to obtain quantitative measurements of physiological changes. For example, biofeedback is used to influence heart rate, respiratory rate, blood pressure, and skin temperature.³ Electronic equipment is used to measure changes in electrical activity of

muscles, brain wave changes, and skin temperature changes.^{9,11} Biofeedback is currently used in physical therapy and is approved by both conventional and alternative practitioners.³ The application of biofeedback is widespread and has more than 150 different applications in health and prevention including temporomandibular joint syndrome, urinary incontinence, chronic pain, and muscle re-education.³

Yoga

Yoga is a relaxation technique that is proposed to promote health by integrating the mind and body through proper breathing, posture, and motion.^{3,9} It is based on a Hindu principle which states that a restless mind results in poor health and an unclear mental state.³ Yoga is a relaxation technique believed to produce physiologic changes which induce relaxation.³ These physiologic changes include decreased respiratory rate, heart rate, blood pressure, oxygen consumption, increased cardiopulmonary function, increased alpha wave activity, and EEG synchronicity (brain wave activity found in deep meditation).³ Hatha yoga, a common type of yoga, combines postures, exercises, breathing, relaxation, proper thinking, and diet in an attempt to clear the mind, energize the body, cleanse the body of toxin, release muscle tension, and increase strength and flexibility.³ Yoga is being used as a complementary therapy to decrease pain and anxiety in a variety of patient populations including patients with cardiovascular disease, diabetes, and chronic pain.³

Therapeutic Touch

Therapeutic touch (TT) is another holistic medicine approach being

utilized. Current research in physical therapy has taken a close look at this alternative therapy.⁵ A more in-depth review of this approach will follow in the next chapter.

CHAPTER III

THERAPEUTIC USE OF TOUCH

The use of touch in physical therapy is a necessary component of the practice. Touch has long been considered a vital component for health and well-being. It is known to convey caring, comfort, acceptance, and nurturance; facilitate the healing process; and influence the individual physically and psychologically.^{7,9,15,16} The use of touch can be traced back to ancient times when “laying on of hands” was used for healing.^{9,13} Physical therapists interact with patients in a very close manner using touch for assessments, testing, and communication. It has become a vital part of the patient-caregiver interaction. Davis^{7(p62)} described how important touch is in physical therapy.

In clinical evaluation, physical therapists learn how to accurately ‘see’ with the fingers what is underneath the skin; in massage, they learn to provide correct stroking to affect venous return and parasympathetic response; in therapeutic exercise, they learn how to place hands ‘just so’ to elicit the sensory reflex that will facilitate the desired response of nerve, muscle, or spindle; and, in treatment, they learn to be precise—as in ‘placing the pillow precisely’—and to perform a given procedure as correctly as possible. In most physical therapy curricula, accuracy of touch is

emphasized far more than is the proper use of equipment and technology.

Effects of Normal Touch

The effects of touch are important in physical therapy treatment.

McCormack²¹ stated that touch therapies promote relaxation by calming the central nervous system. Touch applied in a variety of therapeutic approaches has been found to stimulate the peripheral vascular and lymphatic systems, facilitate circulation, and decrease edema.²¹ Touch may also increase blood flow to muscular tissue and facilitate removal of metabolic and toxic waste.²¹ This can help break adhesions, prevent fibrosis, and break cross linkages of fibrous collagen which cause scarring.²¹ Pain relief is another important effect of touch.²¹ Touch facilitates fluid movement in the body to promote mucous and sinus fluid drainage and also can facilitate peristaltic action to assist in defecation.²¹

Therapeutic Touch Background

Therapeutic touch is a form of touch. Krieger^{23,29} emphasized the importance of touch in patient care. Krieger and Kunz^{9,17,18} collaborated in an effort to develop TT in the late 60s and early 70s. Since then, TT has become a holistic intervention which is used to treat patients on the three levels of mind, body, and spirit. TT has been used mainly in nursing practice but has appeared in the areas of physical therapy, massage therapy, and other nonprofessional practices.³ The research regarding the application of TT to physical therapy and

patient care has been controversial.⁵ This research will be addressed in Chapter IV.

Theoretically, TT attempts to rebalance the energy field of an ill patient.¹⁹ TT does not incorporate religion into its context, and direct touch is not a requirement in TT treatments.^{16,18} Proponents of TT claim that this treatment method results in healing.

The concept of manipulating energy fields is derived from the Eastern world philosophy of practice.¹⁴ To review briefly, Eastern philosophy states that the body has different chakras or meridians which connect to a specific part of the body. Additionally, a universal life force, referred to as “prana,” is present in all of life.^{17,18} Proponents of TT claim that ill patients have an imbalance of this energy force and the practitioner has a surplus. Currently, there is no empirical evidence proving the existence of “prana” or how TT works.¹⁸ Despite this, TT proponents claim that TT works in some cases and has become popular within the holistic realm of medicine.

Therapeutic Touch Process

The process of therapeutic touch involves five steps. These include centering, assessing, unruffling or clearing, balancing, and evaluating.^{16,17,19}

Centering requires the therapist or practitioner to become calm and focused.⁹ This is proposed to facilitate patient-caregiver interaction.

The *assessment* is subjective. The caregiver’s hands assess the patient’s energy field by scanning above the patient’s skin. Skin contact is not required

with TT. Sensations such as heat, cold, tingling, pressure, or electric shocks are some sensations described by caregivers.¹⁹

The next step, *unruffling* or *clearing*, facilitates free flow of the patient's energy field in preparation for rebalancing the energy field. As the practitioner focuses on the unbalanced areas of the patient's energy field, rhythmic hand movements are used over the patient's skin surface.⁹

The next step in the process is to *balance* the energy field with hand movements. The caregiver feels for a harmonious energy field when balancing is successful. Finally, *evaluation* of the patient will determine if TT treatment is successful and healing has occurred. Two case studies of TT treatments are provided in Appendices B and C.^{9,19} These examples describe how TT is applied.

Acknowledging patient perceptions of TT treatment is important in understanding TT. The patient perspective gives some insight into what TT claims to do. Table 3 summarizes how patients generally perceive TT treatments and includes the qualitative data describing patients' perceptions of TT treatment.²⁰

Proponents of TT have based much TT research on qualitative measures.⁵ Scientific validity of TT research has been questioned due to lack of quantitative measures, inadequate sample size, and failure to replicate significant results.⁵ It is important for physical therapists and healthcare providers to be aware that TT is proposed to cause physiologic effects based primarily on subjective data.

Table 3.—Patient Perspectives of TT

<u>During treatment</u>	<u>After treatment</u>
Self awareness	Self awareness
Physiological	Physiological
I had less pain	I am able to swallow without choking
I felt muscle relaxation	I have no muscle spasms
There was a tingling	I can move easier and easier
I really liked the body contact	I have an increasing energy level
	I feel decreasing pain
Mental/emotional	I am seeing myself more and more positive
I felt internal peace	I have a whole new outlook
I was feeling loved	I am whole
I was able to let go	I have a deepening self-perception
I felt like I was being nurtured	I'm growing so much
Other awareness	
Roles	Spiritual
I see her as a teacher	I have a growing spiritual love for myself
I see her as a friend	I am seeing the beauty of others
They are helping me to learn	I am feeling benevolence
A gentle and understanding person	I am living more and more in a God-filled world
They know what they're doing	I have an increasing belief in a universal life force
Relationships	
There is more depth [in relationships]	
I can be more involved [in relationships]	
There is a link between us [self and TT practitioner]	
I am more trusting of them [others]	
I can talk about anything with them [TT practitioners]	

CHAPTER IV

THERAPEUTIC TOUCH RESEARCH

It is proposed that TT results in an energy transfer between the patient and caregiver which is thought to cause physiological changes in the patient.^{22,23} This energy transfer is claimed to be due to the caregiver's conscious desire to help and heal patients. To measure these energy changes in the patient, researchers have used EEGs, EMGs, and EKGs to obtain quantitative data.^{22,24}

Physiological Effects of Therapeutic Touch

Therapeutic touch claims to have physiologic effects similar to normal touch. Therefore, it is important to look at the physiological effects of TT claimed by the research.

One of the important physiological effects of TT is relaxation.^{4,17} Bronstein¹⁷ stated that of all the physiologic systems, the autonomic nervous system is most sensitive to TT. Theoretically, autonomic nervous system activity is altered during TT.^{4,17,25} As a result of relaxation, the parasympathetic nervous system overrides the sympathetic nervous system. When this occurs, various systemic alterations occur including decreased respiratory rate, heart rate, blood pressure, muscle tension, stress and anxiety, and increased blood flow to vital organs.^{4,25}

Pain relief is another effect that TT is proposed to induce.²⁶ Barrington²⁷ claimed that TT decreased post-operative pain and produced a relaxation response, a calming effect, and a feeling of well-being in post-operative patients.²⁷ Boguslawski^{28(p201)} theorized that “pain is blocked through the reduction of anxiety, decreased edema which relieves pressure placed on the nerve endings, or any increased activation of the body’s own analgesics-the endorphins.” Theoretically, the mechanism of pain relief may be caused by the release of endorphins.⁴ By release of these drug-like chemicals in the brain, the patient experiences comfort and a euphoria similar to that felt after laughing or relaxation. Barrington²⁷ also stated that the mechanism of decreased pain after TT treatment is unknown.

Inducing and facilitating a healing response is another claim of TT proponents.¹⁸ Practitioners have claimed that TT is effective in treating full-thickness dermal wounds.^{18,26} Research is lacking in regard to how and if TT induces or facilitates a general healing response.

It has been proposed that TT results in increased blood hemoglobin. Krieger²⁹ conducted research on the effects of TT on blood hemoglobin when TT originated. The study compared recipients of TT, 19 of whom were treated by very experienced healers, and nine who received regular nursing care. Those treated by experienced healers exhibited an increased hemoglobin count while the nine who received regular nursing care showed no increase in hemoglobin levels.³ Krieger’s nursing students replicated the study and found the same results.³ Krieger’s results showed increased patient blood hemoglobin after TT

treatment; however, how it happened was unknown.⁴ Research in this area is still lacking.

It is proposed that TT may improve immunity and serve as prophylaxis against illness.²² Researchers are attempting to prove this theory by examining the area of psychoneuroimmunology. Psychoneuroimmunology is based on the idea that the mind, nervous system, and immune system interact and that emotions affect health and the immune system in positive and negative ways.⁹ The research in the area of psychoneuroimmunology is focused on the connection between the central nervous system and the immune system.⁹

Some psychoneuroimmunology studies have focused on obtaining baseline blood samples to measure suppressor T cell levels and neutrophil levels in order to obtain quantitative data.^{4,18} Proponents have reported significant decreases in suppressor T cells in both TT recipients and caregivers following TT treatment.²⁵ Other findings have proposed that TT results in increased neutrophil activity.⁴

Neuropeptides such as endorphins are found in the brain.³⁰ High levels of endorphins have been found to have beneficial effects on the body, such as promoting well being; improving creativity, self esteem, and immunity; and reducing pain, tension, fear, anger, and depression.³⁰ TT practitioners suggest that release of endorphins may be one mechanism by which TT causes physiological effects.

Therapeutic Touch Criticism

Scientific validity of TT research has been questioned.⁵ Rosa⁵ explained that studies have not been designed well and the credibility, methods, and significance of these studies have been questioned. Inconsistencies in methodology and lack of double-blind and replicated studies are reasons for the criticism and have led to the conclusion that TT had only a placebo effect.⁹ TT by nature is subjective and quantifiable data have been a problem through the 20 years of its development.¹⁶ TT is not the only approach to receive criticism. Scientific evidence is lacking for alternative healing treatments in general.¹⁴ Because many alternative therapies seem to have a spiritual basis, the research data are anecdotal.¹⁴ This is not the quantitative data required by the scientific community.

The National Institutes of Health created the Office of Alternative Medicine (OAM) because of the increased use of alternative therapies.² The OAM stated that alternative therapies “lack sufficient documentation in the U.S. for safety and effectiveness against specific diseases and conditions” and “are not generally reimbursable by health insurance providers.”^{2(p343)} It is interesting that Meehan,³¹ a supporter of therapeutic touch, has agreed with critics of TT. Meehan^{31(p343)} stated:

. . . anecdotal evidence is not enough. . . What is needed from proponents are rigorous, precise, and critical analyses of the concepts and assumptions underlying TT. . . What current research about TT tells us, according to Popper’s principle of

refutation and verification, is that there is no convincing evidence . . . that TT promotes relaxation and decreases anxiety beyond a placebo response, that the effects of TT on pain are unclear and replication studies are needed before any conclusions are drawn. Other claims about outcomes are, in fact, speculation. In studies that purport to link TT to wound healing, it clearly is not TT that is being tested.

. . . To date, there is not a sufficient body of data, both in quality and quantity, to establish TT as a unique and efficacious healing modality. . . Qualitative judgements and evaluation are not sufficient to document and establish TT as an efficacious therapeutic or healing modality. . . If an effect is observable, it can be measured. It is not adequate to state that TT involves mechanisms which cannot be proven by ordinary methods. Such comments are a disservice to science and the practice of healing and demonstrates a commitment to metaphysics and the mystical view of life rather than to a scientific or rational view of life. . . It is inappropriate in the context of a health sciences center to teach and practice TT for another 20 years in the absence of validation of TT as an efficacious healing modality.^{31(p343)}

Using therapies not grounded in science is dangerous and not advised.⁹

Due to all the criticism, it is important to discuss what the implications are for physical therapy.

CHAPTER V

CONCLUSION

Holistic medicine approaches are partially reimbursed by third party payers. Treatments such as therapeutic massage, therapeutic touch, acupuncture, and biofeedback are some of the approaches covered by HMOs.³ These treatments are viewed as preventative care and are being covered by HMOs in an effort to reduce health care costs.³ As holistic medicine approaches become more popular and research proves effectiveness, more insurance companies may offer reimbursement for them.^{3,32} In the long-run, this may result in cost effectiveness due to less invasive therapy.

Holistic approaches can be used as adjunctive or complimentary therapies which would increase treatment options for physical therapists. Patients are taking the initiative and seeking alternative treatments for medical conditions.³ As the alternative treatment approaches gain popularity and are supported with research, incorporating holistic approaches into physical therapy may be advantageous. With more treatment options, the profession of physical therapy may possibly be able to meet the needs of more patients who prefer holistic treatment approaches. These treatment methods are especially common for chronic pain patients.³ Since this is a large patient population in physical

therapy practice, holistic interventions may help physical therapists meet more patients' needs.

Physical therapy practice may consider holistic treatment approaches that are safe and effective. Using therapies not grounded in science is inadvisable.⁹ Approaches such as TT are not considered scientifically valid and are considered ineffective.^{3,5} Although TT lacks scientific validity, more research may prove otherwise. TT is considered a promising area for more research.³²

The scientific community requires concrete, measurable evidence for treatments to be considered scientifically valid. Physical therapy practitioners are advised to be informed about holistic treatment approaches and use holistic approaches if scientific validity has been established. To make informed choices among these treatment methods, it will be helpful for providers to understand the basis of holistic medicine approaches, their personal beliefs of the world, and focus on the objective research of each approach. Until further TT research proves validity, TT is not a recommended treatment option for the physical therapy profession.

APPENDIX A

OTHER HOLISTIC MEDICINE APPROACHES

Relaxation techniques: These techniques combine movement, breathing, and ritual to increase health status and reduce stress. They are based on spiritual philosophies from India (Yoga) and the Orient (Akido and Tai Chi) and are used for guidance in life by those who commit to practice.¹⁴

Rolfing: This approach is based on the principle that structure affects function. Practitioners use deep massage to loosen muscle and fascia in an attempt to rebalance muscles and bones, counteract the effects of gravity on the balance of the body, and realign the head, trunk, and pelvis.^{3,14}

Feldenkrais: This approach incorporates movement awareness exercises to help patients unlearn inefficient movement patterns and learn graceful, free movement.^{3,14} Proponents contend that feldenkrais increases flexibility, coordination, range of motion, and self-awareness.³

Craniosacral therapy: Proponents of this therapy contend that unimpeded flow of cerebrospinal fluid (CSF) enhances health, that skull sutures are not completely fused, and that CSF flow is palpable by simply running fingers over the skull or spine.³ Skull manipulations are proposed to facilitate movement of cerebrospinal fluid, realign bones, and decrease stress and strain within the meninges to promote optimal body function.^{3,14}

Naturopathic remedies: This strategy uses fasting and diet modification to eliminate toxins from the body. It is based on a belief that the body has innate healing abilities. Recommendations for diet include avoiding alcohol, caffeine, and processed foods and promoting consumption of organic and natural foods.¹⁴

Herbal therapy: This strategy has been used for centuries and is currently used for conditions such as premenstrual syndrome, headaches, stress, and digestive problems.¹⁴ Proponents claim that this approach influences the human energy field by altering ingestion and assimilation of nutrients.⁸ Various herbs may be utilized in teas, capsules, juices, baths, ointments, salves, oils, poultices or compresses, and in vapor or inhalation treatments.³

Aromatherapy: This involves inhalation of essential oils used during massage or diffused in the air. Inhalation of different oils can be used for different physical and psychological effects depending on the type of oil.^{3,14} For example, eucalyptus can be used for bronchodilation, expectorant effects, sinus clearing, relief from nausea, and stimulant effects.³ Lavender can be used for relieving mental and physical stress, burns and insect bites, stomachache and toothache, and for anti-inflammatory effects.³ Rosemary can be used for relieving stress, restoring energy, improving cell regeneration, and for anti-bacterial and anti-viral effects.³ Peppermint can be used for anti-bacterial, anti-viral, decongestant, expectorant, and stimulant effects, and for relieving nausea and motion sickness.³ Chamomile is used for anti-inflammatory and anti-bacterial effects, for relieving mental and physical stress, and balancing mind and body.³

Myofascial release: Practitioners contend that fascia restriction may alter flexibility, cause inefficient movement, poor posture, and alter tissue and organ physiology.⁹ The manual technique involves applying gentle pressure in the

direction of fascia restriction to alleviate fascia restriction and restore equilibrium to the body.⁹

Alexander technique: This approach addresses postural alignment by focusing on the head, neck, and trunk.³ Through assessment of the patient's movement patterns, practitioners attempt to correct poor posture and movement habits and promote relaxation.³

Trager approach: This approach incorporates movement re-education techniques to unlearn habits thought to cause pain, limit movement, and that decrease optimal body function.³ Practitioners apply passive techniques such as manual pressure, stretching, and gentle rhythmical rocking to the patient's body.³ To promote relaxation, loosen stiff joints and muscles, and increase range of motion, dance exercises are incorporated to teach the patient to move more freely.³

APPENDIX B

THERAPEUTIC TOUCH APPLICATION: CASE 1

Mills^{19(pp128,129)} described a therapeutic touch application with “Ben” who had an infection in the right foot. The application was explained to the patient and a demonstration was performed with the passing of the hands over the skin surface without contact.

“Standing at Ben’s right side I relaxed, concentrating on my breathing. I was aware of feeling very peaceful and sensitively aware of Ben’s presence. I thought of him as being well and happy. I experienced a deepening sense of quiet, and lost awareness of all external noises and events. I felt deeply centered. I was now ready to assess Ben’s energy field. I passed my hands purposefully and with the intent to help and heal. With palm down, I used long, sweeping, flowing movements from head to feet, over the front of Ben. My mind was clear and alert, and receptive to the clues felt by my hands, I made a mental note of the areas where the field felt imbalanced.

“The feeling of peacefulness expanded, as I continued to sense the energy field and flow. The left side of Ben’s head and face felt hot, the neck felt difficult to pass the hands over. When passing over the area of the liver my hands felt a pressure, also over the stomach area. At the lower abdomen the hands felt a tingling sensation; this sensation also covered the right foot and the last three toes of the left foot.

“ . . . I assessed Ben’s back. I again felt difficulty in passing my hands over the neck area, the same sensation was felt over the area of the liver, and a pulling sensation in the middle of the back. The tingling over the lower abdomen,

right and left foot were the same. I then cleared Ben's field using long sweeping movements of the hands, still being aware of the sensations being felt by the hands, I purposely thought of Ben's field as being rebalanced and repatterned.

"Ben sighed, and looked relaxed, his breathing had become slower. I visualized the heat being dispersed from the side of Ben's face and head. I used my hands to direct the energy imbalance over the neck area, using short movements of the hands at first. When it felt as if the dragging sensation was lessening, I used long sweeping movements to modulate the energy throughout the field. My hands became very sensitive when working over the areas where I had sensed tingling. It was like receiving many tiny electrical impulses all across the palm of my hands. I continually assessed and modulated the energy field until I felt that Ben had received sufficient treatment. . .

"After the treatment, Ben said how relaxed he was and that . . . 'the foot feels great' . . . He mentioned feeling sleepy and appeared quite surprised the TT would have this effect, as he suffered from insomnia. . . Ben filled in his diary sheet: 'During treatment I felt warm sensations to various areas, which had been sore, itchy, and watery. . . It felt as though objects were being placed on my body during treatment. After treatment I felt relaxed and contented. . . 'I found treatment good for relieving tension and gives a positive attitude towards recovery. During treatment I got a warm, tingling feeling over my right foot which helped with the soreness. All the other parts of the body are feeling quite fit and well.'"

APPENDIX C

THERAPEUTIC TOUCH APPLICATION: CASE 2

Davis^{9(pp93,94)} described an application of TT. In this example, TT is referred to as Non-Contact Therapeutic Touch (NCTT).

“Pat is a 34-year-old female who was thrown from her horse and fractured her left ankle, which was placed in a cast for six weeks. After the cast was removed, she developed reflex sympathetic dystrophy syndrome (RSDS). Physical therapy was ordered and the patient complained of severe pain despite the use of modalities for pain control and manual therapy techniques to restore range of motion and strength of the left lower extremity. She sought the intervention of a nurse trained in NCTT to complement her PT sessions. The course of events were as follows:

“Pat arrived in a wheelchair. NCTT was initiated for 20 minutes. The five-step process . . . was performed by a trained practitioner. The patient reported a feeling of warmth in her cold left extremity. She ranked her pain initially at a level 10, but with the initiation of NCTT it was reduced to 5 in the first session. PT continued for two additional sessions between the NCTT. Treatments consisted of joint mobilization, stretching, strengthening, and the initiation of gait training at the parallel bars.

“Pat received NCTT one time during the second week and reported that the pain was decreased to a level 4. She was advanced to a straight cane and therapists noted a greater normalization of gait. Increased range of motion and strength continued and were measured in PT sessions.

“The third therapeutic touch session resulted in a normalization of the entire body in addition to the left lower extremity. Pat was able to ambulate without any assistive device and her pain decreased to a very tolerable level of 2. PT continued with aggressive joint mobilization, gait, and endurance retraining.

“Given the seemingly progressive nature of RSDS, it can be said that this patient made a remarkable recovery with the addition of NCTT. . . NCTT seems to accelerate the healing process, and in the case of this patient, post injury, remarkable progress was made with NCTT in addition to PT.”

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